

# UNIT 2

## PROPORTIONAL REASONING



### L1(4.1) Equivalent Ratios

What is a ratio?

A comparison of two quantities; for example

suppose the ratio of students to chromebooks in our school is 5:1

This means there are 5 students for every 1 chromebook.

What is a proportion?

A statement that two ratios are equal; for example

$$\begin{array}{c}
 x:10 = 2:5 \\
 \swarrow \quad \searrow \\
 x=4 \quad \times 2 \\
 \hline
 4:10 = 2:5
 \end{array}$$

We can find equivalent ratios by using

MULTIPLICATION

OR

DIVISION

An equivalent <sup>same</sup> ratio to  
8 : 10 could be 24 : 30  
 $\times 3$

An equivalent ratio to  
8 : 10 could be 4 : 5  
 $\div 2$

Setting two ratios equal to one another creates a Proportion.

For example, 5:1 = 10:2 or 28:4 = 14:2

## Ratios

Find the missing term

a)  $10:3 = 20:\underline{6}$

b)  $5:\underline{12} = 30:72$

c)  $\underline{24}:18 = 4:3$

d)  $44:20 = \underline{11}:5$

e)  $100:50:20 = 20:\underline{10}:4$

f)  $4:\underline{2}:10 = 32:16:\underline{80}$

Assign Work:

p.112-113 #1bc, 2bc, 3bc,  
4(do in class), 5